UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,349	01/09/2006	Sarah C. Bodary Winter	P1988R1	4763

9157 7590 05/12/2008

GENENTECH, INC.
1 DNA WAY
SOUTH SAN FRANCISCO, CA 94080

EXAMINER	
JIANG, DONG	
ART UNIT	PAPER NUMBER
1646	
MAIL DATE	DELIVERY MODE
05/12/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,349	BODARY WINTER ET AL.	
	Examiner	Art Unit	
	DONG JIANG	1646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-11,14-17,26 and 27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *27* is/are allowed.

6)☒ Claim(s) *9-11,14-17 and 26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED OFFICE ACTION

Applicant's amendment filed on 22 January 2008 is acknowledged and entered. Following the amendment, claims 9, 10, 14, 16 and 17 are amended, and the new claims 26 and 27 are added.

Currently, claims 9-11, 14-17, 26 and 27 are pending and under consideration.

Rejections under 35 U.S.C. §112:

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 9-11 and 14-17 remain rejected, and the new claim 26 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for claims limited in scope to an isolated polypeptide having an amino acid sequence of SEQ ID NO:20, does not reasonably provide enablement for claims to claims to any variant of SEQ ID NO:20 (claim 9, for example). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/use the invention commensurate in scope with these claims, for the reasons of record set forth in the last Office Action mailed on 20 September 2007, at pages 3-4.

Applicants argument filed on 22 January 2008 has been fully considered, but is not deemed persuasive for the reasons below.

At page 6 of the response, the applicant argues that Applicants have amended Claim 9 by reciting a functional limitation "wherein the nucleic acid encoding said polypeptide is over expressed in psoriasis peripheral blood mononuclear cells ...", thus, the claimed polypeptide variants are defined by both a functional property and a structural property. Applicants further argue that Applicants have provided the PRO sequence SEQ ID NO:20 and its encoding nucleic acid sequence, and the specification describes methods for the determination of percent identity

between two amino acid sequences, that the specification also sets forth methods for making the amino acid sequences and methods of preparing the PRO polypeptides, and describes methods using microarray techniques for identifying mRNAs overexpression in psoriasis PBMCs, and that thus, one of skill in the art could identify whether the variant PRO84197 polypeptide falls within the parameters of the claimed invention. This argument is not persuasive for the following reasons. First, the recitation "wherein the nucleic acid encoding said polypeptide is over expressed in psoriasis peripheral blood mononuclear cells" is not a functional limitation *per se,* but rather a descriptor of where one might encounter the nucleic acids that encode the claimed polypeptide. Further, the issue is not whether one of skill in the art could determine percent identity between two sequences, make % variants or carry out microarray assay, rather, the issue is that appellants have not established that there is any conception of nucleic acids ("encoding") in a manner commensurate in scope with the claims, and hence of the claimed polypeptides, as there is no evidence of the actual conception of such nucleic acids, nor is there any evidence of record that they exist. Furthermore, *even if* such variants exist, and were associated with psoriasis, they are completely unpredictable, therefore, there is no way for one of skill in the art to make and use the claimed invention without undue experimentation.

At pages 7-8 of the response, the applicant argues that the Examiner alleges that the specification provide no guidance or working examples as to how the skilled artisan makes a variant associated with psoriasis, however, as discussed in the M.P.E.P. §2164.08, "[t]he specification need not contain an example if the invention is otherwise disclosed in such manner that one skilled in the art will be able to practice it without an undue amount of experimentation. *In re Borkowski,* 422 F.2d 904, 908, 164 U.S.P.Q. 642, 645 (C.C.P.A. 1970)." Given that one of ordinary skill in the art could make and use the claimed variant sequences without any undue experimentation, there is no requirement that the specification provide examples of variant polypeptides. Applicants further argue that that the Examiner's concerns that even if such variants exist in psoriasis, what might happen regarding genetic variations to the polypeptide of SEQ ID NO:20 are completely unpredictable are not valid because one of ordinary skilled can make and test candidate variants with standard methods known in the art and disclosed in the specification, and this would not require undue experimentation, and that "[t]he fact that experimentation may be complex does not necessarily make it undue, if the art

typically engages in such experimentation" (M.P.E.P. 2164.01). This argument is not persuasive because given the nature of the invention, % polypeptide variants wherein encoding nucleic acid is over expressed in psoriasis, which is completely unpredictable, a working example becomes particularly important. MPEP indicates lack of a working example, however, is a factor to be considered, especially in a case involving an unpredictable and undeveloped art (MPEP 2164.02). In *In re Fisher*, 427 F. 2d 833, 839, 166 USPQ 18, 24 (CCPA 1970), the court clearly states: "in cases involving unpredictable factors, such as most chemical reactions and physiological activity, the scope of enablement obviously varies inversely with the degree of unpredictability of the factors involved". In the present case, the specification discloses an amino acid sequence of human PRO84197 with SEQ ID NO:20 and the encoding nucleic acid of SEQ ID NO:19, and no variants thereof meeting the limitation of the claims were ever identified (in psoriasis or any condition) or particularly described. In the absence of working example of any % variant in psoriasis, and the presence of the unpredictability directed to same established by the prior art, further experimentation would be required to determine whether the claimed variants exist in nature and are associated with psoriasis prior to make and use the claimed invention, which, by no means, a *routine* experimentation.

Furthermore, with respect to "an agonist of said polypeptide" in claims 14 and 17, the specification does not disclose any functional activity specifically associated with the polypeptide of SEQ ID NO:20, or any specified activity, which can be tested. Therefore, there is nothing that can be used as the reference for testing, comparing and/or determining the functional nature of a given molecule, i.e., whether it is an agonist of said polypeptide since the functional activity of the polypeptide is unknown. As such, one skilled in the art also would not be able to make the claimed "agonist", and undue experimentation would be required of the skilled artisan to make and use the claimed invention.

Claims 9-11 and 14-17 remain further rejected, and the new claim 26 is further rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the

inventor(s), at the time the application was filed, had possession of the claimed invention, for the reasons of record set forth in the last Office Action mailed on 20 September 2007, at pages 4-6.

Applicants argument filed on 22 January 2008 has been fully considered, but is not deemed persuasive for the reasons below.

At pages 8-9 of the response, the applicant argues that the claimed polypeptides in amended claim 9 have a specific functional property of having an encoding nucleic acid overexpressed in psoriasis PBMC cells, that the specification describes methods for the determination of percent identity between two amino acid sequences, that the specification also describes methods for identifying mRNAs overexpression in psoriasis PBMCs (Example 1), thus, a person skilled in the art is able to recognize that applicants were in possession of the members of the claimed genus, and that the claimed variants meet the standard set forth in the Written Description Guidelines and exemplified by Example 14. This argument is not persuasive because, once again, the recitation "wherein the nucleic acid encoding said polypeptide is over expressed in psoriasis peripheral blood mononuclear cells" is not a functional limitation *per se,* but rather a descriptor of where one might encounter the nucleic acids that encode the claimed polypeptide. Further, the issue is not whether a person skilled in the art could determine percent identity between two sequences, or carry out an assay to identify mRNAs, rather, the issue is that appellants have not established that there is any conception of nucleic acids ("encoding") in a manner commensurate in scope with the claims, and hence of the claimed polypeptides, as there is no evidence of the actual conception of such nucleic acids, nor is there any evidence of record that they exist. All applicants have presented is a *single* nucleic acid found to be overexpressed in said psoriasis PBMCs, and the germ of an idea that there might be variants of the nucleic acid that would be similarly associated. Therefore, the specification provides absolutely no basis for the argument as no variant of any kind for SEQ ID NO:19 (the encoding nucleic acid for the polypeptide of SEQ ID NO:20) was ever identified in psoriasis or anywhere, and it is not even clear whether the claimed variants ever exist. Hence, there is accordingly no written description of the claimed polypeptides, other than the one identified as SEQ ID NO:20. Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method of isolating it. The compound itself is

required. See *Fiers v. Revel*, 25 USPQ2d 1601 at 1606 (CAFC 1993) and *Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.*, 18 USPQ2d 1016. Further, *even if* such possibility existed, what might happen in tumor cells regarding genetic variations to the nucleic acid encoding the polypeptide of SEQ ID NO:20 are completely unpredictable. Therefore, there is no way for a skilled artisan to imagine or envision the detailed structure of the encompassed variants, merely based on one disclosed sequence and methods of calculating % identity and microarray assay. Thus, the specification provides no written support for any variant encompassed by the present claims.

At pages 9-10 of the response, the applicant argues that *Fiers* and *Amgen* d(the examiner relies on) do not apply as they are in the context of DNA related inventions, and the present claims are directed to polypeptides; that, citing case law *Enzo Biochem., Inc. v. Genprobe, Inc.* 296 F.3d 1316 (Fed. Cir. 2002), the instant claims meet the standard set by the *Enzo*; that while the invention in *Enzo* was still a DNA, the holding has been treated as being applicable to proteins as well. This argument is not persuasive because *Fiers* and *Amgen* indeed apply to the instant situation as the concept and logic is the same, and as the holding of *Enzo* is applicable to proteins. Applicants standard/logic does not seem to be inconsistent when applying different case law. Further, with respect to the holding of *Enzo* (the combination of functional activity and structural homology), as addressed previously and above, the recited "functional activity" is not a functional limitation *per se,* but rather a descriptor of where one might encounter the claimed polypeptide. Furthermore, the more important issue is that, with the exception of SEQ ID NO:20 and the encoding nucleic acid of SEQ ID NO:19, the specification fails to provide any variants thereof meeting the limitation of the claims. Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method of making it.

Furthermore, with respect to "an agonist of said polypeptide" in claims 14 and 17, once again, the specification merely discloses an amino acid sequence of human PRO84197 with SEQ ID NO:20, and no agonist thereof meeting the limitation of the claims were ever identified or particularly described. The specification also fails to disclose any functional activity directly associated with the polypeptide of SEQ ID NO:20. Thus, there is no way for a skilled artisan to envision the detailed chemical structure of the encompassed "agonist". Therefore, only the PRO84197 polypeptide SEQ ID NO:20, but not the full breadth of the claims ("an agonist of said polypeptide") meets the written description provision of 35 U.S.C. §112, first paragraph.

Applicant is reminded that *Vas-Cath* makes clear that the written description provision of 35 U.S.C. §112 is severable from its enablement provision (see page 1115).

Conclusion:

Claim 27 is allowable.

Advisory Information:

Any inquiry concerning this communication should be directed to Dong Jiang whose telephone number is 571-272-0872. The examiner can normally be reached on Monday - Friday from 9:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Nickol, can be reached on 571-272-0835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dong Jiang/
Primary Examiner, Art Unit 1646
5/8/08